PHASE ONE: BREAK DOWN
LIGHT AND BUBBLES

Mission: What happens when light bounces off of a bubble?

Age: 5+
Materials: $5

Time: 20 min
(Set-up: 5 min | Activity: 10 min | Clean-up: 5 min)

What you need:

Materials:
- 1/4 cup dishwashing liquid (clear is best but any type will work)
- 1/2 cup corn syrup
- 1 cup water
- A blank piece of white paper

Equipment:
- Straw
- A plate
- Flashlight
- A darkened room

What to do:

1. Prepare the bubble mix: combine 1 cup of water and 1/2 cup of corn syrup. Stir thoroughly until the corn syrup is fully mixed in. Then add 1/4 cup of dishwashing liquid to the mixture and stir. (Note: The corn syrup helps the bubbles last longer before popping, but you don't need it if you don't have any.)

2. Take your bubble mix, plate, and flashlight into a room that can be darkened (keep the lights on for now!).

3. Pour enough bubble mix onto the plate to completely cover the bottom.

4. Dip your straw into the bubble mix and blow gently to make a bubble. Try to get a stable bubble dome, a few inches wide, to sit on the surface of the liquid. This can take some practice! (Hint: Once you get a small bubble started, lift the straw out of the liquid to blow more air into the bubble and make it bigger. If your bubbles keep popping, try adding more dishwashing liquid.)

5. Turn off the room light and shine the flashlight onto the bubble. What do you see?

6. Now move your head or flashlight around the bubble. What changes do you notice?

7. Hold the sheet of white paper a few inches behind the bubble and shine the flashlight through the bubble onto the paper. What do you see on the paper?

8. Try moving the flashlight closer or further away from the bubble. What changes do you notice?

9. Explore more! Try blowing more bubbles to explore different patterns of color. Try using a straw to blow a bubble inside another bubble without popping it. Try blowing the biggest bubble you can--a bigger dish can help. Or, try using different colored lights. What differences do you notice?

Clean-up:

Pour the bubble mix into the sink and wash the dish with water. Wash your hands!